Remarks

Claims 1-8 and 10-21 were pending.

Claims 1-5, 10 and 12-15 are under active consideration by the Examiner.

Claims 6-8, 11 and 16-21are presently withdrawn.

Claims 1-3, 5, 10, 12 and 15 are rejected under 35 USC 103(a) as being obvious over Schmid, US 5,642,486 which discloses a layered metal flake coated with two layers of metal oxides such as silicon oxide. There is no teaching regarding the instant layer thickness of 250 to 350 nm.

Applicants respectfully traverse the rejection.

The instant invention provides a specific architecture of layered aluminum/silica flake which possesses significantly improved properties over other similar known flakes. In designing metallic luster pigment, several factors were known to be important and need to be considered. Obviously the color or hue is primary, but the brightness of any metallic pigment is also vital and, as was also known at the time of the invention as discussed on page 1 of the instant specification and the references thereon, the protection of the metal flake against corrosion and unwanted fracture must be dealt with.

Obviously thicker silica layers on the aluminum will provide better protection, but thicker layers not only impact color in terms of hue, but can also negatively impact brightness, which is particularly important for metallic pigments.

The layered flakes of the instant invention provide a specific and optimized solution to the problems associated with the contradictory demands of brightness and protection. That is, as stated in the paragraph bridging page 1 and 2 of the instant specification "metal flakes having a brighter appearance and a greater brilliance in comparison with the aluminum flakes known from the prior art can be obtained if the layer thickness of the SiO_z layer is in the range of from 200 to 350 nm, preferably from 250 to 300 nm, wherein $0.70 \leq z \leq 2.0$, preferably $1.4 \leq z \leq 2.0$".

US 5,624,486 discloses luster pigments based on multiply coated platelet like metallic substrates, such as aluminum flakes, comprising A) a first layer consisting essentially of silicon oxide, aluminum oxide and/or aluminum oxide hydrate, B) a second layer consisting essentially of metal

and/or nonselectively absorbing metal oxide, and C) if desired, a third layer consisting essentially of colorless or selectively absorbing metal oxide. The pigments of US 5,624,486 are said to show not only a virtually unchanged strong metallic luster but also a strong interference color.

The Action states that it would be obvious for one to prepare a pigment comprising any of the layers US '486, for example a silica layer within the 1 to 800 nm, 5 to 600 nm or 70 to 600nm thickness of US '486, and that such optimization is within the skill of the practitioner.

However, Applicants respectfully point out that there is no guidance in US '486 as to what thicknesses of the silica layer are preferred for use in obtaining particular characteristics. The Examples contain no mention of what the thickness is of the layers produced therein. Applicants have found that a relatively thicker silica layer, 250 -350 nm as compared to the 70 or more of 'US 486, can be used to provide good protection to the alumina flake while at the same time maximizing the brightness. No suggestion of this confluence of characteristics can be found in the cited art. A copy of the statement of Inventor Patrice Bujard is attached.

Applicants respectfully submit that nothing in the disclosure of US '486 would provide enabling guidance allowing one to develop the specific bright metallic pigments of the instant invention without undue and excessive experimentation. Applicants respectfully suggest that the finding that a layer of this specific thickness maximizes brightness on top of providing protection to the aluminum flake constitutes significant and unexpected results.

Applicants therefore respectfully submit that the broad disclosure of US '486 does not suggest the results of the instant invention and that the 103(a) rejections over Schmid, US 5,642,486 are overcome and kindly ask that they be withdrawn.

Claims 4, 13 and 14 are rejected under 35 USC 103(a) as being obvious over Schmid, US 5,642,486 in view of Coulter US 6,150,022.

Applicants respectfully traverse the rejection.

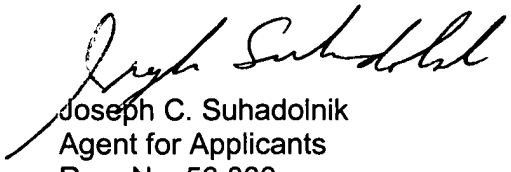
US 6,013,370 discloses Al flakes coated with a dielectric to improve their mechanical properties and to keep them flat. Applicants respectfully point out that there is no direction given in US '370 as to the thickness of the dielectric layer and thus the fundamental deficiency of US 5,642,486 as detailed above is not remedied.

Applicants acknowledge that the Examiner uses US '370 to establish that it is known to use certain thicknesses of aluminum. However, the thickness of the silica layer is an essential feature of the instant invention and that without addressing this feature the combined art does not direct one to Applicants' invention. Applicants respectfully submit that the combination of US '370 with US '486 still fails to direct one to the instant layered flakes wherein the layer thickness of the SiO_z layer is in the range of from 200 to 350 nm. As above, Applicants suggest that the finding that a layer of this specific thickness maximizes brightness on top of providing protection to the aluminum flake constitutes significant and unexpected results.

Applicants therefore respectfully submit that the 103(a) rejections over Schmid, US 5,642,486 in view of Coulter US 6,150,022 are overcome and kindly ask that they be withdrawn.

Applicants respectfully submit that all rejections have been addressed and are overcome and kindly ask that they be withdrawn and that claims1-5, 10 and 12-15 be found allowable. Upon finding said claims allowable, Applicants kindly ask that Claims 6-8, 11 and 16-21 be rejoined for the reasons detailed in Applicants amendment mailed June 6, 2008, and also found allowable. In the event that minor amendments will further prosecution, Applicants request that the examiner contact the undersigned representative.

Respectfully submitted,



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ENCLOSED: Declaration of Patrice Bujard
Petition for 2 month extention